

The corrected observed time of the termination of the eclipse was $10^h 28^m 51^s.5$ A.M.

The Longitude of the place of observation is $5^h 3^m 4^s$ East.

The Latitude $11^\circ 44' 38''$ North.

III. Sextant Measures of the Sun at the Eclipse of the Sun on the 21st December, 1843. By Captain Sir Edward Belcher, R.N. Communicated by Captain Beaufort, R.N.

The observations consist of nineteen measures of the breadth of the illuminated portion of the sun during the progress of the eclipse. The longitude of the place of observation was $124^\circ 12' 30''$ east, the latitude $24^\circ 21' 20''$ north.

IV. On a Graphical Method of Predicting Occultations. By J. I. Waterston, Esq. Communicated by Captain Beaufort, R.N.

The following is the author's account of his method:—

“The following is a description of a graphical method of predicting occultations, which I have found useful in drawing the attention of some of my pupils to this valuable method of determining meridian distance.

“The prediction of the time is almost an essential preliminary to the observation, and the computation required for this, in the usual way, is such as to put it altogether beyond the reach of many who would otherwise be perfectly able and willing to make the observation, and who have many valuable opportunities in the course of their profession of improving geography by such means. The method is simply delineating the essential points in the orthographical projection of the moon's motion and that of the observer in a plane perpendicular to the direction of the star. This is simplified to the utmost by means of scales, and I find that, with a little practice, my pupils have no difficulty in predicting the time of observation to 1 or $1\frac{1}{2}$ minutes, and this without much care being taken in the drawing. From several occultations, which I predicted and observed here, and from numerous examples taken from the Astronomical Society's *Transactions*, I find that, with ordinary care, the predicted time may be depended upon within one minute, and that the time occupied in doing so varies from 10 to 15 minutes. As this is sufficiently near for all the wants of the observer, it may, perhaps, serve to supersede the method of computation, which, in its simplest form, is an irksome task, and probably tends to make occultations less frequently observed than they otherwise might be.

“With officers duly initiated, and observatories at work, observing all that are visible as a regular part of their duty, the most valuable results to geography might be anticipated.

“I have appended a rule for computing the moon's right ascension and the consequent error of assumed longitude, which is derived from the same method of orthographical projection. It is rigidly correct in principle (with the exception of taking small arcs instead

of their sines, which in no case affects the result in any sensible degree), and the results of computation may be depended upon within a hundredth part of a second of right ascension if the data are correct, and a considerable error in the estimated longitude, will, I think, be found to have as little injurious effect as in any other method of computation.

“*Bombay, May 1, 1844.*”

V. Some Remarks on the Great Comet of 1843, as seen in the neighbourhood of Paramatta, New South Wales. By the Rev. W. B. Clarke. Communicated by Sir John Herschel.

The principal point to which the author directed his attention, during the time of the visibility of the comet, was the fact of the existence of a small train of light inclined at a small angle to the large train.

His own observations were corroborated by those of the Bishop of Australia, who had made distinct notes of its appearance. His lordship says:—

“On the evenings of Thursday the 2d instant, and again on Saturday the 4th, my attention was drawn to the remarkable spectacle of a definite portion of the tail being deflected from the axis, or direction in which the general body of light continued to proceed. Perhaps, about one-sixth of the train might be thus drawn aside from that which may be termed the natural direction, so as to form therewith, at the point of separation, an angle which I should calculate to be about three degrees Five-sixths of the whole body of light continued without interruption in the ordinary direction, the remainder deviating from it in the manner here stated.”

VI. Observations made at the Observatory of Hamburg. By C. Rumker, Esq. Communicated by Dr. Lee.

The observations consist of:

1. Continuation of the Meridian Observations of the Moon from 1840, August 7, to 1841, February 12.
2. Observations of the Eclipse of the Moon of 1844, May 31.
3. Observations of *Pallas* and *Ceres* during their opposition, May 1844.

VII. Scheme of Planetary Elements. By S. M. Drach, Esq.

The Chairman reported to the Meeting, that her Majesty's Government had recently put the Society in possession of the remainder of the apartments under the ground floor; and that, after some necessary repairs, they will be ready for the reception of various instruments, books, &c. belonging to the Society, which have been hitherto deposited in various places without that regard to order and arrangement, which it will be possible to give them with the present enlarged accommodations of the Society.